

THE WATER USE CYCLE

BACKGROUND

Water is a critical factor in our daily lives. We cannot live without it. Seventy percent of the human body is composed of water. Water serves as a solvent for all living systems, carrying nutrients to cells and removing waste products.

Historically, access to clean water has been pivotal in the establishment of human civilizations. Today water is still a precious commodity that influences the success of modern societies. The earth is a water planet with more than seventy percent of its surface covered in water. However, less than three percent of this is fresh water (free of salts, and the majority of this fresh water is frozen in the polar icecaps and glaciers. Less than 0.03 percent of the water on earth exists as fresh surface water (rivers, lakes, and streams).

Water use by humans can be divided into two phases: *How we obtain water* and *what do we do with the water afterwards*. Simply obtaining clean drinking water is becoming an increasing issue for many areas of the world. Following its use, water quality can be significantly altered. Various substances end up in the water including sewage, detergents, and fertilizers, pesticides, toxic chemicals, and automotive oils.

As part of the hydrologic cycle, water moves through the atmosphere and is redeposited on earth. However, no new water is being created, emphasizing the importance of how we use the water that is available. In the modern world *we all live downstream of other water users*.



If a bathtub full of water represented all the water on the earth, then less than a teaspoon would represent the available potable fresh water (appropriate for human consumption).